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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,664	09/29/2003	David Haase	EMC-03-100	2361
24227	7590	04/22/2008	EXAMINER	
EMC CORPORATION			FARROKH, HASHEM	
OFFICE OF THE GENERAL COUNSEL			ART UNIT	PAPER NUMBER
176 SOUTH STREET			2187	
HOPKINTON, MA 01748			MAIL DATE	DELIVERY MODE
			04/22/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/673,664	Applicant(s) HAASE ET AL.
	Examiner HASHEM FAROKH	Art Unit 2187

—The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

THE REPLY FILED 31 March 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) The period for reply expires ____ months from the mailing date of the final rejection.
- b) The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because

- (a) They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) They raise the issue of new matter (see NOTE below);
- (c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. Applicant's reply has overcome the following rejection(s): _____.

6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. For purposes of appeal, the proposed amendment(s): a) will not be entered, or b) will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: 1,2,6-9,13-16,20 and 21

Claim(s) withdrawn from consideration: 3-5,10-12 and 17-19.

AFFIDAVIT OR OTHER EVIDENCE

8. The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fail to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet

12. Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____

13. Other: _____

/Kevin L Ellis/
Primary Examiner, Art Unit 2188

Continuation of 11. does NOT place the application in condition for allowance because: In page of 7 of the Remarks Applicant states: Young fails to meet this burden for at least the reason that it neither discloses or suggests the step of:

"... restoring the source by copying data content from the clone to overwrite the data content of the source while allowing host reads and writes to the source during the restoring step, said copying being determined by a clone delta map, used to track extents of the clone that are different between the clone and the source, and a protected restore map, used to track extents of the source that are modified during the restoring step, when an indication is set in the clone delta map and not set in the protected restore map"

As been indicated in previous office action, Young teaches the above limitations (e.g., see column 11-44 and Fig. 6c of Young). Young uses the shadow bitmap to track the differences in the master store (e.g., source) and the subsidiary store. For example a "1" in shadow bitmap indicates that corresponding data block in the master store and shadow store are different. During restoration or recovery of master store the content of shadow bitmap is copied to copy bitmap and shadow bitmap is cleared (Step S30b in Fig.6c). Then Steps S31b to S33b is repeated if protection of data in master or source is not required and Steps S31b to S36b is repeated if protection of the data in master is required.

In page 8 of Remarks, Applicant argues:

"As described in the previous response, Young fails to condition the copying performed at step \$34b based on both a 'set' bit condition in the copy bit map and a 'not set' condition in the shadow bit map." (Emphasis added).

At Step S32b of Fig. 6c Young teaches that data corresponding to a "1" in the copy bitmap is copied to the master store. Since the shadow bitmap has been cleared, a "1" in copy bitmap has a corresponding "0" in the shadow bitmap. In case of protection of data in the master store corresponding bits in the copy bitmap and the shadow bitmaps are set to "0" and "1", respectively (e.g., see Steps S35b and S36b). In page 8 of remarks, Applicant further argues:

"As described in Applicant's specification, at pages 15-16:

When a host-write request is received for the Source LU during a Protected Restore, a determination is made whether a COD is required prior to processing the request. This determination is made by checking both the Delta Map and the Protected Restore Map. If there are bits set in any of the extents of the Delta Map that represent those regions affected by the host I/O request (read or write) and the corresponding bit is NOT set in the Protected Restore Map, then a COD is required. After each required COD has completed, the bit that corresponds to the extent affected by the COD is cleared

from the Clone's Delta Map. This is done to ensure that the Sync Engine does not subsequently copy the data from the Clone to the Source which would cause a host write request (which triggered a COD) to later be overwritten with data from the Clone.

After each COD required for a host write request has been completed, the bit(s) that correspond to the extent affected by the request are set in the Protected Restore Map. This is done to track the changes between the Source and Clone."

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., COD) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In summary, the Examiner believes that Young teaches all limitations as recited in the claims, accordingly the Examiner maintains his position.

/Hashem Farrokh/
Patent Examiner, Art Unit 2187